

June 21, 2017

VIA EMAIL

Chair Fiorini and members of the Delta Stewardship Council

Re: Proposed Draft Policy On Delta Conveyance

Dear Chairman Fiorini and members of the Council:

These comments are provided on behalf of Save the California Delta Alliance. We do not believe that the currently proposed draft is consistent with the requirements of the Delta Reform Act for the reasons explained below. We are providing herewith a marked up version of the draft that we believe would make it consistent with the Delta Reform Act as explained below. (Attachment One—Markup Draft Policy).

The current draft is a policy to increase water supplies. It is a transparent “greasing of the skids” to approve the currently proposed California WaterFix Alternative 4A. Like WaterFix, it omits meaningful provisions for “protecting, restoring, and enhancing the Delta ecosystem,” and omits meaningful provisions for enhancing “the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place.” Water Code § 85054—the coequal goals. *See* Letter from Jared Blumenfeld, Regional Director USEPA to David Murillo, Regional Director Bureau of Reclamation, October 30, 2015, p.2 (“The proposed project and the alternatives evaluated in the SDEIS support the water reliability component, but largely defer actions necessary to protect water quality and aquatic life to the future”) (commenting on Alternative 4A, current WaterFix tunnel proposal).

I. Any Conveyance Project Should Substantially Improve Water Quality In The South And Central Delta And Must Substantially Increase Through-Delta Flows Of Sacramento River Water.

To meet the requirement of restoring and enhancing the Delta ecosystem and enhancing recreational, natural resource, and agricultural values” conveyance improvements must *substantially improve* water quality in the south and central Delta, and must substantially increase through-Delta flows of Sacramento River water, *especially in the summer-fall months and during dry periods*. Recreation, agriculture, and the ecosystem all currently suffer from degraded water quality and inadequate through-Delta flows of Sacramento River water caused by the current water export system. *See* August 26, 2014, Letter from Jared Blumenfeld, USEPA Regional Director to Will Stelle, West Coast Regional Director National Marine Fisheries Service, p. 2 (recognizing “that existing freshwater diversions and significantly diminished seaward flows have played a significant role in precluding the recovery of the Bay Delta ecosystem processes and declining fish populations”). Climate change will exacerbate this situation, making the need for increased through-Delta flows more acute. *Id.* Any conveyance improvements should do

at least as much for through-Delta water quality and quantity as they do for water exports. Consistent with the Delta Reform Act's requirement that the Council reduce reliance on the Delta as a source of exported water, decreased exports are consistent with improvements in Delta conveyance and enhanced reliability of the water system. "Reliable" does not mean "increase exports."

Increased through-Delta flows should be based on the 2010 Flow Criteria Report, which concluded that 75% of unimpaired flow would be required to protect Delta public trust resources. The Council is required to consider the flow criteria report and is required to take particular care to protect public trust resources. The DSC Chair's comment that the 2010 Flow Criteria Report is out of date and should not be considered is contrary to the Delta Reform Act and contrary to California public trust doctrine. Water Code § 85086(c)(1) (Flow Criteria Report is "for the purpose of informing planning decisions for the Delta Plan" and BDCP); Water Code § 85023 ("reasonable use and the public trust doctrine shall be the foundation of state water policy and are particularly important and applicable to the Delta").

Increased storage capacity in an integrated storage-conveyance project would allow a "Big Gulp–Little Sip" approach, where water is diverted through any new intakes *only at times of peak storm flow* allowing for a baseline of greater through-Delta flows at most times, and especially during dry periods and the summer-fall months. The current Draft Delta Plan policy on conveyance is not consistent with the Delta Plan's current exhortation to "A Better System: Storing Floods to Ride Out Droughts (and Give the Delta a Break)." Delta Plan, p. ES-6.

II. Conveyance Projects To Move Water From Points Upstream To The Export Pumps Should Be Routed Around The Legal Delta To Avoid Devastating Construction Impacts And Tunnel Muck Should Not Be Dumped Within The Delta.

To meet the requirement of enhancing "the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place" any conveyance improvements *should not* include below ground conveyance ("tunnels"). Tunnels are more expensive than a canal. The only purpose for tunnels is to allow a direct route through the heart of the Delta, which destroys Delta as place and Delta recreation through at least 11 years of continuous, heavy construction including vibration, blasting, pile driving, rock drills, helicopter over-flights and tens of thousands of barge trips: "Construction of the Alternative 4A intakes and related water conveyance facilities [tunnels] would result in permanent and long-term (i.e., lasting over 2 years) impacts on well-established recreational opportunities and experiences in the study area because of access, noise, and visual setting disruptions that could result in loss of public use. These impacts would occur year-round." 2016 Bay Delta Conservation Plan/California WaterFix Final EIR/EIS, p. 15-469. The Meadows Slough, considered to be the queen of Delta recreational anchorages, has been selected as a construction staging area with a concrete batch plant, fuel station, muck dump, and other construction facilities that will ruin this Delta treasure. A canal route to the east (probably to the east of highway 5) would be the only possible route, if a new point of diversion could prove viable by meeting the requirements of I above. That is the only way to avoid construction impacts and avoid locating concrete batch plants, staging areas, fuel stations, spillways, and other construction infrastructure within prime Delta recreation areas. Tunnels are not consistent with the requirements of the Delta Reform Act.

Further, there is no reason to expressly include the construction of new intakes. There are

numerous intakes on the Sacramento River (See Attachment Two) that could be utilized in conjunction with other agencies. The Council has no basis to conclude that new intakes are needed. Construction of new intakes is disruptive to Delta communities and recreation. Operation of intakes is harmful to fish. The proposed CWF intakes *will increase mortality to Salmon*. The Delta Reform Act calls on you to promote the doubling of the Salmon population. Water Code § 85302(c)(5). As of the latest Draft Biological Opinion for CWF *Salmon will be harmed* and the proponents have been incapable of devising any magic fish screens that will avoid this impact. New intakes are not consistent with the Delta Reform Act and should be avoided.

III. Conveyance Improvements Should Not Hinder Or Inconvenience Navigation: No Delta Gates.

Conveyance improvement should not hinder or inconvenience navigation, including recreational navigation. Freedom of navigation in recreational boating and the Delta as place are inseparable. Gates, locks, and barriers placed throughout the Delta, including at the head of Georgiana Slough, are inconsistent with the Delta Reform Act. The current draft conveyance policy promotes multiple gates. This is unacceptable.

IV. Any Isolated Conveyance Should Be Part Of A Storage-Portfolio Project.

Any isolated conveyance improvement project should be an integral part of an integrated storage-conveyance-portfolio project. Promises to add future storage to make conveyance improvements effective are meaningless; storage must accompany conveyance as one project. The history of California water infrastructure is a history of broken promises to add future improvements. As four former Delta lead scientists put it: “Simultaneous attention to a portfolio that includes actions like addressing overuse and misuse of water, and improving ground water management and storage, should accompany any necessary water infrastructure adjustments.” Luoma, et al., Delta Challenges, p. 4 (Delta Science Program 2014). *See also* August 26, 2014, EPA Letter, p. 3 (“Other reasonable alternatives could be developed by incorporating a suite of measures, including Integrated Water Management, water conservation, levee maintenance, and decreased reliance on the Delta”). Groundwater storage is one of the most promising options. Because they lack integrated storage, the current WaterFix proposal, and the draft Conveyance Policy do not take pressure off the Delta during dry periods. Professor Mount, who spoke before the Council on May 25, 2017, at the behest of tunnel advocates has acknowledged as much. Speaking of the same conveyance facility that is proposed in WaterFix (and blessed by the Council’s draft policy) and including the range of operating scenarios currently proposed, Professor Mount concluded that:

In sum, although there are many regulatory and infrastructure constraints, BDCP does make use of the dual points of diversion to create modest increases in wet year exports and, depending on which export scenario is evaluated, equal to or greater exports in drier years. *BDCP therefore does not achieve the broader goal of reducing pressure on the Delta during dry years by shifting exports to wet years.*

Mount, et al., Panel Review of the Draft Bay Delta Conservation Plan, September 2012 (emphasis original). “Expanding storage, particularly groundwater storage, would have created considerably more flexibility in exports, particularly during wet years.” *Id.*

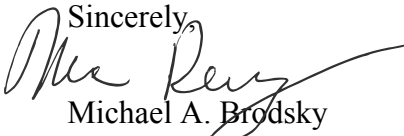
V. Any Major New Intake Facilities Should Be Located At Least Ten Miles From

Designated Legacy Communities And Historic Districts.

Any major new intake facilities should be located at least ten miles from designated Delta legacy communities and historic districts. Construction facilities should be located at least ten miles from prime Delta recreation areas, such as the Meadows Slough. The recent addition to the draft policy, which states that a “project should consider and protect the unique character and historical importance of legacy communities,” leaves the door open for WaterFix. WaterFix locates its three intakes such that the designated legacy town of Hood is engulfed by the intake construction site. The legacy community of Clarksburg is directly across the river from the northernmost intake and will be bombarded with noise, vibration, helicopter over-flights, blasting, and overrun with over 4,000 construction workers. These towns, and particularly the Clarksburg Marina, will be devastated by un-buffered 102 DbA pile driving for years on end. These communities cannot survive intake construction. DWR promises to appoint a complaint officer and erect noise barriers—steps that would purport to comply with the draft policy and at the same time be ridiculously inadequate to protect these communities. The only solution is to consider these communities *when locating* intake sites and locate the intakes elsewhere. This was not done. (See Attachment Three map of construction impacts on legacy communities).

VI. The Delta Is Not A Dump: Tunnel Muck Dumps (“Spoils Material Stockpiles”) Should All Be Located Outside The Delta.

The Delta is not a tunnel muck dump. Dumping 30,000,000 cubic yards of tunnel muck anywhere in the Delta is inconsistent with the Delta Reform Act. The recent revision to the draft policy stating that the project should “compliment the Delta landscape and minimize aesthetic impacts, including visual impacts of spoils material stockpiles” is a blessing of turning the Delta into a dumping ground. Spoils materials must be hauled away to appropriate disposal sites outside the legal Delta.

Sincerely,

Michael A. Brodsky

DISCUSSION DRAFT
NOT APPROVED BY THE DELTA STEWARDSHIP COUNCIL
SUBJECT TO CHANGE

By taking into account effects on the Delta, conveyance outside of the Delta can be operated to complement Delta conveyance and expanded storage. Local conveyance improvements and sustainable water management actions taken outside the Delta can contribute to the coequal goals through a comprehensive, integrated water management approach that considers multiple water supply sources, including but not limited to surface water storage, groundwater, stream flow, imported water, water transfers, stormwater, desalinated water, and recycled water, as applicable.¹⁰¹

RECOMMENDATIONS

With regard to new and improved infrastructure—relating to water conveyance in the Delta, water storage systems, and the operation of both to achieve the coequal goals—the Delta Plan promotes the design, implementation, and operation of new and improved water conveyance infrastructure and new or expanded water storage that are consistent with the criteria in Sections I, II, and III, below. To develop a robust water management system that provides flexibility to adapt to changing conditions, conveyance should be integrated and operated in tandem with enhanced water storage in the Delta watershed and the Delta export area to optimally achieve the coequal goals while protecting and enhancing the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place. Sections I, II, and III contain a suite of actions to be collectively pursued in an integrated manner with existing Delta Plan policies and recommendations. All promoted options should be managed so Delta water supplies further the coequal goals and incorporate the best currently available science and adaptive management. Further, Delta Plan performance measures can assist the Council in tracking progress in meeting its objectives, including those related to conveyance, storage systems, and the operation of both.

These provisions are recommendations; they are not regulations.

They are intended to provide guidance to agencies implementing projects but do not apply to a project's consistency with the Delta Plan under Water Code section 85225, or any appeal to the Council of a certification under Water Code sections 85225.5 et seq.

I. NEW AND IMPROVED WATER CONVEYANCE

A. Promote Options for New and Improved Infrastructure Related to Water Conveyance

Subject to completion of environmental review and approval by the lead agency, and applicable regulatory approvals from other public agencies, the following infrastructure options are hereby promoted.

¹⁰¹ Howitt et al. 2010; Hanak et al. 2012; Howitt et al. 2015

DISCUSSION DRAFT
NOT APPROVED BY THE DELTA STEWARDSHIP COUNCIL
SUBJECT TO CHANGE

1. The California Department of Water Resources (DWR) the U.S. Department of the Interior, Bureau of Reclamation (Reclamation), ~~and local beneficiary agencies~~ should pursue a dual-conveyance option for the Delta. Dual conveyance is a combination of through-Delta conveyance and isolated conveyance to allow operational flexibility. Dual conveyance alternatives should be evaluated, and a selected plan designed and implemented, consistent with Section I.B., below. Dual conveyance should incorporate ~~existing and new intakes and facility levee improvements for both isolated, below ground conveyance and through-~~ Delta conveyance of State Water Project (SWP) and Central Valley Project (CVP) water supplies from the Sacramento River to the south Delta, as follows:
- (a) The isolated conveyance should ~~incorporate one or more new screened intakes that~~ protect native fish and ~~that are be~~ operated to minimize harmful reverse flow conditions in Old and Middle rivers while ~~maintaining substantially enhancing~~ water quality ~~and increasing through-Delta flows~~ for in-Delta uses, ~~particularly in the summer-fall months and in dry periods~~. Isolated conveyance should complement existing and improved through-Delta conveyance to promote operational flexibility, ~~protect substantially enhance~~ water quality, and support ecosystem restoration. ~~To avoid harm to aquatic species, including salmon, isolated conveyance should utilize existing intakes first and where feasible avoid construction of new intakes.~~
 - (b) To protect the Delta ecosystem, the State Water Resources Control Board should ensure that operational criteria for new and improved conveyance facilities comply with applicable State Water Resources Control Board requirements, including any flow criteria adopted pursuant to Water Code 85086(c)(2).¹⁰² ~~In particular, the SWRCB should take heed of the 2010 Flow Criteria Report, which concluded that 75% of unimpaired flow would be required to protect public trust resources in the Delta.~~
 - (c) ~~With or without~~ ~~D~~ dual conveyance, ~~conditions~~ requires continued maintenance and further improvement of through-Delta conveyance. Through-Delta conveyance improvements may include channel improvements consistent with the Delta Plan and

¹⁰² Water Code section 85086(c)(2) provides, "Any order approving a change in the point of diversion of the State Water Project or the federal Central Valley Project from the southern Delta to a point on the Sacramento River shall include appropriate Delta flow criteria and shall be informed by the analysis conducted pursuant to this section. The flow criteria shall be subject to modification over time based on a science-based adaptive management program that integrates scientific and monitoring results, including the contribution of habitat and other conservation measures, into ongoing Delta water management."

DISCUSSION DRAFT
NOT APPROVED BY THE DELTA STEWARDSHIP COUNCIL
SUBJECT TO CHANGE

additional facilities that could provide for improved operations for native fish protection. Vegetated setback levees and channel margin habitat should be included wherever feasible.

2. DWR in collaboration with local beneficiary agencies should pursue ~~new~~ alternative intake and conveyance facilities for conveying SWP supplies from the Sacramento River to SWP contractors in Solano and Napa Counties. This is both to protect native fish and improve the quality and reliability of water supplies delivered via the North Bay Aqueduct.

3. Local agencies, in coordination with DWR and Reclamation, should pursue new conveyance facilities or conveyance facility improvements that allow use of multiple ~~existing~~ Delta and or existing upstream intakes associated with the Los Vaqueros Project. This would increase operational flexibility for local, SWP, and CVP municipal and should substantially increase environmental¹⁰³ ~~water supplies conveyed from the through-Delta flows of Sacramento River water into the central and south Delta and out to sea.~~ Appropriately phased non-disruptive decreases in water exports, if necessary to achieve these ends, is consistent with the goal of improving water system reliability and decreasing reliance on the Delta.

3.4. Local agencies, in coordination with DWR and Reclamation, should pursue new conveyance facilities or conveyance facility improvements to connect the Central Valley Project and State Water Project to new or existing groundwater recharge facilities in the Central Valley and Southern California. Any proposal for isolated conveyance improvements within the legal Delta shall include conveyance improvements in the Central Valley and/or Southern California to increase groundwater recharge and decrease exports from the Delta during the summer months and dry periods.

4.5. DWR, Reclamation, and local beneficiary agencies, in coordination with the California Department of Fish and Wildlife, National Marine Fisheries Service and U.S. Fish and Wildlife Service, should evaluate and identify for near-term implementation feasible actions to contribute to reducing fish losses associated with existing pumping operations at the Banks Pumping Plant and Jones Pumping Plant, consistent with the 2009 *Biological Opinion and Conference Opinion on the Long-Term Central Valley Project and State Water Project Operations Criteria and Plan*; the

¹⁰³ ~~“Environmental water” is defined in the Delta Plan as providing minimum flow levels of a specific quality that are needed in order to assure the continued viability of fish and wildlife resources for a particular water body. This water is used to maintain and enhance the beneficial uses related to the preservation and enhancement of fish, wildlife, and other aquatic resources or preserves as specified in the Porter Cologne Water Quality Control Act. See Glossary, Delta Plan, Delta Stewardship Council, 2013, as amended.~~

DISCUSSION DRAFT
NOT APPROVED BY THE DELTA STEWARDSHIP COUNCIL
SUBJECT TO CHANGE

2009 *Biological Opinion on the Coordinated Operations of the Central Valley Project and State Water Project in California*; and the 2014 *Recovery Plan for Evolutionarily Significant Units of Sacramento River Winter-run Chinook Salmon and Central Valley Spring-run Chinook Salmon and the Distinct Population Segment of California Central Valley Steelhead*. These actions may include, but are not limited to:

- (a) Implementing changes to the operations and physical infrastructure of the facilities where such changes can improve fish screening and salvage operations and reduce mortality from entrainment and salvage.
- (b) Evaluating and implementing effective predator control actions, such as fishery management or directed removal programs, for minimizing predation on juvenile salmon and steelhead in Clifton Court Forebay and in the primary channel at the Tracy Fish Collection Facility.
- (c) Evaluating and implementing effective predation reduction actions associated with salvage operations, such as transporting and releasing fish in multiple locations in the Delta.
- (d) Installing equipment to monitor for the presence of predators and to monitor flows at the fish collection facilities.
- (e) Modifying Delta Cross Channel gate operations, consistent with increasing through-Delta flows of Sacramento River water, including flows into and through the central and south Delta, and evaluating methods to control access to Georgiana Slough and other migration routes into the interior Delta to reduce diversion of listed juvenile fish from the Sacramento River and the San Joaquin River into the southern or central Delta. Such actions should not include gates, barriers, locks, or other impediments that would hinder or inconvenience navigation, including recreational navigation.

B. Evaluate, Design, and Implement New or Improved Conveyance or Diversion Facilities in the Delta

1. In selecting new and improved Delta infrastructure for conveying SWP, CVP, and market transfer water supplies from the Sacramento River to the south Delta, project proponents should analyze and evaluate a range of alternatives that includes all of the following:
 - (a) A reasonable range of flow criteria, rates of diversion, and other operational criteria required to satisfy applicable requirements of State and federal fish and wildlife agencies and the State Water Resources Control Board, and other operational requirements and

DISCUSSION DRAFT
NOT APPROVED BY THE DELTA STEWARDSHIP COUNCIL
SUBJECT TO CHANGE

flows necessary for protecting, restoring, and enhancing the Delta ecosystem under a reasonable range of hydrologic conditions (as described under Section III.B, below). This includes identifying water available for export and other beneficial uses¹⁰⁴, consistent with water quality requirements of the State Water Resources Control Board.

- (b) A reasonable range of dual-conveyance alternatives, including options ~~for for the number and location of new intakes~~, a range of isolated conveyance capacities, through-Delta conveyance improvements, and other facilities that could improve operations for native fish, ~~and enhance~~ in-Delta water quality, ~~and increase through-Delta flow especially in the summer-fall months and during dry periods~~ as applicable.
- (c) The potential effects of climate change on the conveyance alternatives under consideration, including possible precipitation and runoff pattern changes, temperature, and sea level rise estimates, ~~and the potential combined effects of new conveyance facilities and climate change to promote cyanobacteria blooms~~ consistent with guidance provided by the California Natural Resources Agency, National Research Council, or other appropriate projections.
- (d) The potential effects on migratory fish and aquatic resources and habitats.
- (e) The potential effects on Sacramento River and San Joaquin River flood management.
- (f) The resilience and recovery of Delta conveyance alternatives to catastrophic failure caused by earthquake, flood or other natural disaster.
- (g) The potential effects of each Delta conveyance alternative on Delta water quality, flows, and water levels, including the effects of these changes on in-Delta water users.
- (h) The operational benefits and/or detriments of providing multiple intake locations.
- (i) The potential short-term and long-term effects of each Delta conveyance alternative on terrestrial species.

¹⁰⁴ The Delta Plan defines beneficial use as uses of the waters of the state that include domestic, municipal, agricultural, and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves (Delta Stewardship Council, 2013, as amended, and defined in sections 659-669 of 23 California Code of Regulation, Division 3, Chapter 2, Article 2).

DISCUSSION DRAFT
NOT APPROVED BY THE DELTA STEWARDSHIP COUNCIL
SUBJECT TO CHANGE

- (j) The potential effects of each Delta conveyance alternative on the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place.
- (k) The cost-effectiveness of the alternatives in furthering the coequal goals. Cost-effectiveness means the degree to which a project or action is effective in achieving desired outcomes in relation to its cost.¹⁰⁵
2. Project proponents should design and implement new or improved conveyance infrastructure in the Delta consistent with the following parameters:
- (a) Located in areas with seasonally favorable freshwater conditions, and areas that are less vulnerable to degradation during sustained droughts and under anticipated future climate change and sea level rise conditions.
- (b) Located to avoid impacts to and, where possible, improve conditions for habitat restoration opportunities in priority restoration areas identified in the Delta Plan, and other important restoration opportunity areas identified by the California Department of Fish and Wildlife.
- (c) Located, designed, and operated to have no significant adverse impact on any species and no significant adverse impact on the human environment and to minimize adverse-enhance conditions for native aquatic and terrestrial species, including but not limited to those conditions related to flow direction, through-Delta flow quantity, and water quality.
- (d) Designed to avoid or minimize native fish entrainment and impingement such that no significant adverse impact to any species occurs.-
- (e) Designed to balance less than significant adverse project impacts against the project's long- and short-term benefits.
- (f) Designed to minimize disruptions to transportation and business activities during routine maintenance activities, with consideration given to scheduling planned maintenance activities in consultation

¹⁰⁵ A cost effectiveness analysis assesses the degree to which a project or action is effective in achieving desired outcomes in relation to its cost. A cost-effectiveness analysis differs from a cost-benefit analysis, which assigns a monetary value to the outcomes or effects and compares that monetary value to the cost. Cost effectiveness is often applied where it may be inappropriate or difficult to assign monetary value to the outcomes or effects, such as ecosystem benefits or public health outcomes. In the context of evaluating alternatives, a cost effectiveness analysis can help identify the least costly way of achieving a desired benefit.

DISCUSSION DRAFT
NOT APPROVED BY THE DELTA STEWARDSHIP COUNCIL
SUBJECT TO CHANGE

with local governments to minimize impacts to residents and businesses, and establishing communication protocols to notify residents of planned and unplanned maintenance activities.

- (g) Designed to complement the Delta landscape and minimize aesthetic impacts, including ~~visual impacts prohibition~~ of spoils material stockpiles within the legal Delta.
- (h) Designed to maximize beneficial reuse of spoils materials to the extent practicable and feasible.
- (i) Implemented in accordance with detailed project implementation plans developed in cooperation with affected communities, local governments, the Delta Protection Commission, and stakeholders to minimize and/or mitigate adverse environmental effects to a level of insignificance consistent with Delta Plan Policy GP 1, and avoid or reduce conflicts with existing or planned land uses consistent with Delta Plan Policy DP P2, and in consideration of Delta Plan recommendations DP R14, DP R16 and DP R17. Project implementation plans should consider and protect the unique character and historical importance of legacy communities by locating any new infrastructure at least ten miles from legacy communities and historic districts,¹⁰⁶ be consistent with the State's policy regarding the human right to water, and incorporate good neighbor policies to avoid negative impacts on agricultural lands, residents, and business. Items that should be addressed in the plans include, but are not limited to, the following:
 - (i) Construction sequencing or phasing;
 - (ii) Temporary and long-term spoils placement outside the legal Delta;
 - (iii) Plans for temporary traffic routing that are consistent with local transportation plans, including consideration of permanent improvements to transportation and alternative transportation routes to avoid the most severe impacts to levels of service during construction;
 - (iv) Effects of construction activities on recreation and other visitor-related activities and businesses within the Delta shall be avoided by planning any new isolated conveyance routes outside the boundaries of the legal Delta except at connection points to intakes and Clifton

¹⁰⁶ Bethel Island, Clarksburg, Courtland, Freeport, Hood, Isleton, Knightsen, Rio Vista, Ryde, Locke, and Walnut Grove are the Delta's legacy communities (Public Resources Code section 32301(f)).

DISCUSSION DRAFT
NOT APPROVED BY THE DELTA STEWARDSHIP COUNCIL
SUBJECT TO CHANGE

Court Forebay, ~~including~~ disruptions to transportation, temporary waterway closures, aesthetic and noise effects, and impacts to access to marinas, parks, and other recreation facilities within the Delta shall be avoided by locating any new isolated conveyance routes outside the legal Delta except where necessary to connect to intakes and the Clifton Court Forebay;

(v) Effects on local surface water and groundwater supplies during construction;

(vi) Mechanisms for communicating with landowners, communities, and local governments before and during construction;

(vii) Mechanisms by which community members and stakeholders can raise concerns during construction and in association with ongoing facility operations and maintenance, including a mechanism for community members and stakeholders to invoke mandatory arbitration during construction to resolve disputes over impacts from construction of facilities, including the authority of the arbitrator(s) to order changes in construction sequence, methods, and timing, and to order compensation and or mitigation for impacts of construction; and

(viii) Legally-permissible project delivery methods which are cost effective and provide for an expedited design and construction timeline that minimizes disruption to affected communities.

2. Projects that contain major isolated conveyance elements designed to move water to the Jones and Banks pumping plants for export shall be part of a portfolio project that includes increased storage plus one or more of the following portfolio elements: integrated water management, use of recycled water, storm water capture, conservation, or other measures that create "new water."

C. Improve or Modify Through-Delta Conveyance

1. Project proponents shall ~~include~~ include in any proposal for constructing of new conveyance facilities the integrated design, implementation, and adaptively management of improved or modified through-Delta conveyance and appurtenant facilities (such as ~~gates, permanent barriers, or~~ fish handling facilities, levee improvements, including setback levees and channel margin habitat, non-disruptive fish directional devices such as bubble curtains and changes in channel geometry at the cross-

DISCUSSION DRAFT
NOT APPROVED BY THE DELTA STEWARDSHIP COUNCIL
SUBJECT TO CHANGE

Delta channel and Georgiana Slough to route fish away from the interior Delta without hindering or inconveniencing navigation) to:

- (a) Substantially lessen or avoid impacts and provide net improvements to riparian habitat and channel margin habitat along anadromous fish migratory corridors and, where feasible, enhance conditions for native fish.
- (b) Substantially lessen or avoid impediments and provide net improvements to anadromous fish migration.
- (c) Substantially lessen or avoid impacts to public safety and include or contribute to levee improvements along Old and Middle Rivers consistent with Chapter 7 of the Delta Plan.
- (d) Modify the conveyance capacity or hydraulic characteristics of existing Delta waterways (e.g., improving levees and/or dredging) in a manner that provides multiple benefits, including: taking advantage of periods when water flow and quality conditions are favorable for improving water supply delivery reliability, quality, and flexibility so long as equal or greater improvements in in-Delta water quality and increases in through-Delta flows are achieved by the same action and for protecting, restoring, and enhancing the Delta ecosystem; improving floodplain values and functions; improving habitat conditions during fish migration; and reducing flood risks.

II. NEW AND IMPROVED WATER STORAGE

A. Promote Options for New or Expanded Water Storage

Subject to completion of environmental review and approval by the lead agency, and applicable regulatory approvals from other public agencies, options for new or expanded water storage are hereby promoted as follows:

Improvements to storage are the key to success of any plan to improve water system reliability and restore the Delta ecosystem. Therefore, any proposal for new conveyance facilities shall come only as part of integrated storage-conveyance project.

1. Within the Delta watershed, project proponents should design and operate new or expanded offstream or onstream surface water storage projects consistent with the criteria in Section III.B. to:

DISCUSSION DRAFT
NOT APPROVED BY THE DELTA STEWARDSHIP COUNCIL
SUBJECT TO CHANGE

- (a) Provide water supply reliability¹⁰⁷, water quality, operational flexibility to adapt to changing conditions, and ecosystem benefits under variable hydrologic conditions, and, where possible, flood risk management benefits.
 - (b) Improve resilience to the effects of climate change, sea level rise, higher stream temperatures, long-term drought conditions, and emergency supply disruptions.
 - (c) Allow greater flexibility in storing water supplies during periods when more water is available for carryover into periods when less water is available and/or Delta exports are reduced.
 - (d) Take advantage of periods when the water flow, quality, and environmental requirements of State and federal agencies are being met, for improving water supply delivery reliability and flexibility and protecting, restoring, and enhancing the Delta ecosystem.
 - (e) Contribute to improved conjunctive management¹⁰⁸ of both surface and groundwater resources to maximize efficient water use and contribute to sustainable management of groundwater basins, consistent with the Sustainable Groundwater Management Act.
2. Within the Delta water export area, project proponents should implement new or expanded surface water storage projects that improve resilience to the effects of climate change and drought and are operated to allow storage of exported and local surface water supplied during wetter periods for use during dryer periods when exports from the Delta are reduced. Opportunities to store stormwater and recycled water supplies of suitable quality should also be promoted as a strategy for improved regional water management and reduced reliance on the Delta. This includes projects in the San Francisco Bay Area, San Joaquin Valley, Central Coast region, and Southern California.
 3. Within the Delta watershed and Delta water export area, project proponents should implement groundwater storage and extraction projects, including facilities for groundwater withdrawal, recharge, injection, and monitoring that are consistent with the criteria in Sections

¹⁰⁷ "Water supply reliability" is defined in the Delta Plan, in general terms, as providing a more reliable water supply for California by better matching the state's demands for reasonable and beneficial uses of water to the available water supply. See also Chapter 3 of the Delta Plan (Delta Stewardship Council, 2013, as amended).

¹⁰⁸ Conjunctive management is the coordinated and planned management of both surface water and groundwater resources to maximize efficient water use. Water is stored in groundwater basis for future use by intentionally recharging the basin during year of above-average surface water supply. See Glossary, Delta Plan, Delta Stewardship Council, 2013, as amended.

DISCUSSION DRAFT
NOT APPROVED BY THE DELTA STEWARDSHIP COUNCIL
SUBJECT TO CHANGE

II.C below. Priority should be given to groundwater storage projects over surface storage projects. To the extent that increased groundwater storage can eliminate the need for increased surface storage, groundwater storage shall be given priority.

4. The State Water Resources Control Board should review and consider revisions to existing regulations to facilitate the safe use of recycled water, stormwater, and other local water supplies for groundwater replenishment. Water importers who receive Delta water shall implement the use of recycled water to the extent lawfully permitted, including the use of recycled water for irrigation of crops, either through groundwater recharge or direct application of recycled water, consistent with Delta Plan Policy WR-P1.

B. Design, Construct and Implement New or Expanded Surface Water Storage

1. Project proponents should design, implement, and adaptively manage new or expanded surface storage¹⁰⁹ projects in the Delta, its watershed, and Delta water export areas to:
- (a) Improve resilience of the State's water supply system through demonstration of benefits under current and anticipated future conditions, including climate change, changing water demands, and regulatory conditions.
 - (b) Contribute to regional self-reliance and reduced reliance on the Delta.¹¹⁰
 - (c) Demonstrate contributions to the goals of the Sustainable Groundwater Management Act by promoting conjunctive use to achieve long-term groundwater basin sustainability.
 - (d) Enable participation in water exchanges and transfers that benefit the Delta ecosystem and improve regional water supply reliability.
 - (e) Demonstrate cost-effectiveness, where cost-effectiveness means the degree to which a project or action is effective in achieving desired outcomes in relation to its cost.
 - (f) Minimize and mitigate the impacts of storage on stream flows and water quality, including impacts during construction.

¹⁰⁹ "Surface storage" is defined in the Delta Plan as Reservoirs used to collect and hold water for future release and use. See also Glossary, Delta Plan, Delta Stewardship Council, 2013, as amended.

¹¹⁰ "Regional self-reliance" is defined in the Delta Plan as the degree to which a region implements water management options so that it can provide for all of its needs for water from within its own borders. See also see regulatory policy WR P1 and recommendations WR R4 and WR R18 of the Delta Plan, Delta Stewardship Council, 2013, as amended.

DISCUSSION DRAFT
NOT APPROVED BY THE DELTA STEWARDSHIP COUNCIL
SUBJECT TO CHANGE

- 1 2. Project proponents should design and implement new or expanded
2 surface water storage projects in the Delta and Delta watershed, where
3 feasible, to further achievement of the coequal goals by:
- 4 (a) Providing for the dedicated storage of water¹¹¹ during wet periods
5 for carry over and later use during dry periods, while balancing the
6 benefits of providing more natural, functional flows¹¹² to the Delta
7 and its tributaries, meeting other ecosystem needs and providing
8 flood risk management benefits.
- 9 (b) Enhancing water temperature management on Delta tributaries
10 either directly or through coordinated operations with other
11 facilities.
- 12 (c) Incorporating storage space dedicated to ecosystem benefits,
13 such as flow management, water temperature, other water quality
14 benefits, or providing water supplies to wildlife refuges.
- 15 (d) Integrating new and/or expanded storage with other existing or
16 planned storage and conveyance systems to increase ecosystem
17 and water supply benefits. This includes developing and/or
18 updating coordinated operations plans, and/or agreements with
19 other storage and conveyance systems.
- 20 (e) Contributing to the protection of water quality in the Delta and its
21 watershed for all beneficial uses consistent with the State Water
22 Resources Control Board's Bay-Delta Plan.
- 23 (f) Contributing to more natural, functional flows that support
24 ecosystem health.¹¹³
- 25 3. Project proponents should design and implement, where feasible, new or
26 expanded surface water storage projects outside the Delta watershed, but
27 within the Delta water export area, such as projects within the San
28 Joaquin Valley, Central Coast, or Southern California regions, to:
- 29 (a) Contribute to reduced reliance on the Delta and regional self-
30 reliance and, particularly during dry periods, through storage of
31 available water supplies during wet periods for use during dry
32 periods.

¹¹¹ "Dedicated water" is defined by the California Department of Water Resources as water distributed among urban and agricultural uses, used for protecting and resorting the environment, or storage in surface water and groundwater reservoirs. See Glossary, Delta Plan, Delta Stewardship Council, 2013, as amended.

¹¹² Defined on page 134 of Chapter 4 of the Delta Plan, Delta Stewardship Council, 2013, as amended.

¹¹³ Defined in the Delta Plan, Delta Stewardship Council, 2013, as amended.

DISCUSSION DRAFT
NOT APPROVED BY THE DELTA STEWARDSHIP COUNCIL
SUBJECT TO CHANGE

- (b) Promote conjunctive management of surface and groundwater resources, and contribute to achieving groundwater sustainability goals established pursuant to the Sustainable Groundwater Management Act or applicable local plans, as appropriate.
- (c) Contribute to a comprehensive, integrated water management approach that considers multiple water supply sources including, but not limited to, stream flow, groundwater, imported water, stormwater, and recycled water, as applicable.

C. Implement New or Expanded Groundwater Storage

1. Funding, planning, and technical support provided by State and regional agencies for groundwater projects should:
 - (a) Promote multiple benefits, minimize harmful effects to the ecosystem, help achieve Bay-Delta Plan objectives, as applicable, and be consistent with guidance from the State Water Resources Control Board and DWR for implementing the Sustainable Groundwater Management Act.
 - (b) Promote increased groundwater recharge using locally available water, such as recharge via stream-aquifer interactions, floodwater or stormwater capture, recharge using recycled water, or others, provided such actions do not result in harmful impacts to functional flows in local streams.
 - (c) Promote conjunctive management of surface water and groundwater resources, including in-lieu recharge.
 - (d) Promote new or expanded groundwater banking and exchange projects.
 - (e) Promote the construction of new or improved local conveyance infrastructure to convey water to and from groundwater recharge and recovery facilities.
 - (f) Promote the construction of new or improved conveyance infrastructure that interconnects Delta export conveyance facilities with local conveyance facilities.
 - (g) Promote implementation of the Central Valley Salt and Nitrate Management Plan and achievement of management goals and priorities for protection of water quality, where appropriate.
 - (h) Promote wellhead treatment, access to conjunctively-managed surface supplies, or other means of providing access to safe, clean, and affordable water supplies for communities relying on impaired groundwater.

DISCUSSION DRAFT
NOT APPROVED BY THE DELTA STEWARDSHIP COUNCIL
SUBJECT TO CHANGE

- (i) Demonstrate consistency with applicable Groundwater Sustainability Plans under the Sustainable Groundwater Management Act.
- (j) Include new infrastructure that is consistent with Sections II.C(a)-(c), above.
- (k) Assess the ecosystem and water supply impacts and benefits to the Delta, including providing mitigation, as appropriate.
- (l) Promote opportunities for storage of flood waters (e.g., floodplain storage) or stormwater that can be managed for groundwater recharge.

- 2. DWR should develop a model ordinance for groundwater recharge that urges cities and counties to incorporate groundwater recharge and storage into land-use planning and zoning, and to protect areas with the highest potential for groundwater recharge from incompatible uses. (Note: A representative map showing the soil suitability index for groundwater banking projects on agricultural lands is shown in Attachment A [Figure C-1].)
- 3. DWR or the State Water Resources Control Board should prepare a proposal for an incentive program, in coordination with the Department of Conservation or the U.S. Department of Agriculture's conservation programs, for landowners to protect lands with high groundwater recharge potential for the purpose of contributing to sustainable groundwater management.

III. IMPROVE OPERATIONS OF STORAGE AND CONVEYANCE

A. Promote Options for Operations of Storage and Conveyance Facilities

Subject to completion of environmental review and approval by the lead agency, the following options for the operation of conveyance and storage are hereby promoted:

- 1. DWR, in coordination with Reclamation, should develop a Drought Water Operations Strategy for the SWP and CVP to meet State Water Resources Control Board-specified flow and water quality criteria during extended drought conditions lasting up to six years, or for the extended timeframe recommended by the Real Time Drought Operations Team (RTDOT)¹¹⁴ describing opportunities and tools to improve routine operations to adapt to drought conditions. In developing the Strategy,

¹¹⁴ RTDOT includes: CA Department of Water Resources, CA Department of Fish and Wildlife, State Water Resources Control Board, U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, and National Marine Fisheries Service.

DISCUSSION DRAFT
NOT APPROVED BY THE DELTA STEWARDSHIP COUNCIL
SUBJECT TO CHANGE

DWR and Reclamation should include criteria for defining appropriate levels or stages of drought affecting the North, Central, and South Delta Water Agencies. The Strategy should consider in-Delta actions and activities, and operations and storage of other facilities or projects that support achievement of the coequal goals. This strategy should be submitted to the Delta Stewardship Council by 2020 and be updated following future declarations of emergency associated with extreme hydrological conditions pursuant to the California Emergency Services Act (Government Code Sections 8550-8668), within one year of completing an After-Action Report, or when physical or regulatory changes necessitate an update.

~~4.2.~~ DWR and Reclamation should engage in a deliberative planning process and environmental review as described in number 1 above and should not continue to invoke exemptions to environmental review on a year-to-year basis for in-Delta drought measures under the Governor's emergency authority.

~~2.3.~~ DWR and Reclamation should use an adaptive management approach, consistent with the Delta Plan's adaptive management framework¹¹⁵ and in alignment with existing collaborative adaptive management efforts, for the coordinated operation of SWP and CVP through-Delta conveyance to promote the coequal goals, including considerations for protecting, enhancing, and restoring the ecosystem and maintaining adequate flows, flow direction, water levels, and water quality for Delta agriculture, recreation, and communities.

~~3.4.~~ Lead agencies for new or modified conveyance facilities, and new and expanded storage facilities—including those options identified in I.A. and II.A., above—should develop operational plans consistent with Section III.B., below.

~~4.5.~~ To improve water management flexibility and to support coordinated operations with new storage facilities, local agencies—in coordination with DWR and Reclamation, as appropriate—should pursue the following new or improved conveyance facilities outside of the Delta, to reduce reliance on the Delta and promote regional self-reliance¹¹⁶:

- (a) Facilities that promote the movement or exchange of SWP, CVP, and local water supplies, such as between the east and west sides of the San Joaquin Valley or between other regions.

¹¹⁵ See page 38 of the Delta Plan, Delta Stewardship Council, 2013, as amended.

¹¹⁶ See regulatory policy WR P1 and recommendations WR R4 and WR R18 of the Delta Plan, Delta Stewardship Council, 2013, as amended.

DISCUSSION DRAFT
NOT APPROVED BY THE DELTA STEWARDSHIP COUNCIL
SUBJECT TO CHANGE

- (b) Facilities that improve groundwater recharge and/or conjunctive use in overdrafted aquifers of the San Joaquin Valley, Tulare Lake Basin, and other Delta water export areas.
- (c) Facilities that increase groundwater banking or exchange, or that promote increased use of stormwater, recycled water, desalinated water, or other local water supplies in regions tributary to, or that rely on, Delta water supplies.

B. Operate Delta Water Management Facilities Using Adaptive Management Principles

1. Project proponents should develop plans for the operation or reoperation of water conveyance and control facilities in the Delta, or new or modified storage facilities in the Delta and its watershed, that incorporate adaptive management consistent with the Delta Plan's adaptive management framework.¹¹⁷ No major conveyance project may be certified consistent with the Delta Plan unless a completed adaptive management plan is in place at the time a record of decision is adopted. To be considered complete, adaptive management plans shall, at the time a record of decision is adopted, include specified parameters, monitored throughout the Delta, such as dissolved oxygen, turbidity, salinity, irradiance, temperature, fish movement, nitrogen and phosphorus levels, cyanobacteria blooms or the presence of cyanotoxins, and shall include numerical triggers for each parameter and shall include the specified management action that shall be taken for each trigger. and Adaptive management shall further achievement of the coequal goals by:
 - (a) Including specific and measurable operating objectives (consistent with State Water Resources Control Board's Bay-Delta Plan objectives), that address:
 - (i) Protection for and enhancements to the Delta ecosystem, including improved water temperature management, while reliably delivering water.
 - (ii) Avoidance or mitigation of adverse effects on in-Delta recreation and in-Delta water quality, including identifying salinity targets for the south Delta that are designed to prevent severe water quality degradation and toxic events in dry and critically dry years.
 - (iii) Avoidance or mitigation of adverse effects on stream flows and water quality.

¹¹⁷ See page 38 of the Delta Plan, Delta Stewardship Council, 2013, as amended.

DISCUSSION DRAFT
NOT APPROVED BY THE DELTA STEWARDSHIP COUNCIL
SUBJECT TO CHANGE

- (iv) Avoid or mitigate adverse effects on agriculture in the Delta, including identifying salinity targets suitable for the types of crops grown in the Delta.
- (v) Protection of the quality, reliability, and affordability of water supplies for communities relying on impaired water supplies, including disadvantaged communities, consistent with California Water Code section 106.3.
- (b) Enabling diversions during periods when Delta water flow, quality, and environmental requirements are being met for improving water supply delivery reliability and flexibility to changing conditions, and for protecting, restoring, and enhancing the Delta ecosystem.
- (c) Incorporating adaptive management plans, consistent with the Delta Plan's adaptive management framework¹¹⁸ and developed in coordination with operators and applicable regulatory agency staff, for modifying operations to meet State Water Resources Control Board flow and water quality requirements, and California Department of Fish and Wildlife conservation and recovery goals, under the following:
 - (i) Extended drought conditions (more than three years in duration).
 - (ii) Changed climate conditions including sea level rise and changed hydrologic conditions over the anticipated project life.
 - (iii) Extreme wet years and flood events.
- (d) Demonstrating that projects can contribute to a more reliable water supply, and can protect, restore, and enhance the Delta ecosystem under a range of future conditions, including changing climate and sea level rise projections from the California Natural Resources Agency or National Research Council, or other appropriate projections.
- (e) Evaluating the applicability of forecast-informed reservoir operations.
- (f) Considering coordination and integration of operations with existing and/or planned conveyance and water storage facilities to maximize their potential to contribute to the goals of the

¹¹⁸ See page 38 of the Delta Plan, Delta Stewardship Council, 2013, as amended.

DISCUSSION DRAFT
NOT APPROVED BY THE DELTA STEWARDSHIP COUNCIL
SUBJECT TO CHANGE

Sustainable Groundwater Management Act, and the goals of other applicable programs and plans related to sustainable groundwater, stormwater, and floodwater management.

- (g) Reviewing and updating, as needed, the flood space reservation guidelines for upstream reservoirs in coordination with the U.S. Army Corps of Engineers and reservoir owners or operators.

2. Project proponents should develop operation plans for new water conveyance facilities in the Delta, and new or expanded storage facilities in the Delta watershed, that:

- (a) Ensure that operations are adequately monitored, evaluated, and revised using adaptive management to make progress towards achieving defined performance measures.
- (b) Be based upon accurate, timely, and transparent water accounting and budgeting.
- (c) Ensure that operations provide water levels, water flow, and water quality suitable for in-Delta agricultural and recreational uses.

C. Update the Bay-Delta Plan and Consider Drought

1. In developing and implementing updates to the Bay-Delta Plan, and flow requirements for priority tributaries to the Delta to protect beneficial uses in the Bay-Delta watershed, the State Water Resources Control Board should:

- (a) Consider and contribute to achievement of the 2010 Flow Criteria Report goal of 75% of unimpaired flow to the maximum extent practicable considering competing beneficial uses and contribute to achievement of applicable Delta Plan performance measures.
- (b) Require water diverters in the Delta and its watershed that are responsible for meeting Bay-Delta Plan requirements, including but not limited to DWR and Reclamation, to develop a process and plan for meeting applicable flow and water quality requirements during extended drought conditions (characterized by multiple, successive dry years) to further the coequal goals and minimize reliance on temporary urgency change petitions and related requests.
- (c) Require water diverters in the Delta and its watershed that are responsible for meeting Bay-Delta Plan requirements, including but not limited to DWR and Reclamation, to develop a long-term process and plan for achieving substantially increased through-Delta flows and substantially improved in-Delta water quality such

DISCUSSION DRAFT
NOT APPROVED BY THE DELTA STEWARDSHIP COUNCIL
SUBJECT TO CHANGE

that through-Delta flows and flows on all Delta watershed tributaries would reach at least 80% of unimpaired flow (or an equivalent appropriate metric) by the year 2100.

D. Operate New or Improved Conveyance and Diversion Facilities Outside of the Delta

1. Conveyance facilities outside the Delta should be operated in consideration of effects on Delta water quality, the timing and magnitude of flows in the Delta, water supplies available for export from the Delta, and effects on opportunities to protect, restore, and enhance the Delta ecosystem.
2. In allocating funding for new water conveyance and conveyance improvement projects outside the Delta that support regional self-reliance, the State should give preference to projects that:
 - (a) Reduce reliance on the Delta for water supply during dry and critically dry years by the specific designation, in operational agreements or plans, of carryover storage for beneficial use during these periods.
 - (b) Improve conjunctive management of surface and groundwater resources and contribute to achieving groundwater sustainability goals established pursuant to the Sustainable Groundwater Management Act or local plans, as appropriate.
 - (c) Support ecosystem enhancement and/or provide more natural, functional flows¹¹⁹ in the Delta and its tributaries.
 - (d) Improve the ability of regions that rely on the Delta, for all or a portion of their water supplies, to withstand and adapt to changing current and future hydrologic conditions.
 - (e) Improve the quality, reliability, and affordability of water supplies for communities relying on impaired water supplies, including disadvantaged communities, consistent with California Water Code section 106.3.
 - (f) Contribute to a comprehensive, integrated water management approach that considers multiple water supply sources including, but not limited to, stream flow, groundwater, imported water, stormwater, desalinated water, water saved through increased efficiency, and recycled water, as applicable.

¹¹⁹ Delta Plan, Delta Stewardship Council, 2013, as amended.

DISCUSSION DRAFT
NOT APPROVED BY THE DELTA STEWARDSHIP COUNCIL
SUBJECT TO CHANGE

- 1 (g) Improve flexibility to accommodate water market transfer and
2 exchange opportunities that benefit the environment.

3 **E. Promote Water Operations Monitoring Data Management, and Data**
4 **Transparency**



5 In meeting the requirements of the 2016 Open and Transparent Water Data Act,
6 DWR should coordinate with the Council to incorporate information related to
7 Delta Plan performance measures and links to the Council's online tracking and
8 reporting tools, as appropriate, in an effort to promote transparency and
9 accessibility of data in tracking progress toward achieving the coequal goals.



INTAKES ON THE SACRAMENTO RIVER ARE BEING BUILT WHILE EVERYONE DISCUSSES BDCP & CONVEYANCE OPT



on intakes or facilities have been constructed over the last 10 years, while CALFED and the BDCP planning process continues. Does the CALSIM and DSM2 computer water diversions from the Sacramento River north of the Delta? Historical records indicate an average of 17 million acre feet per year flowed past the I-Street bridge a. How much water is left to flow past the I-Street bridge after the new intakes are completed? (See the excel spreadsheet of the same topic)

List compiled by N. Suard, Esq, <http://www.snugharbor.net> for distribution to Delta residents upon

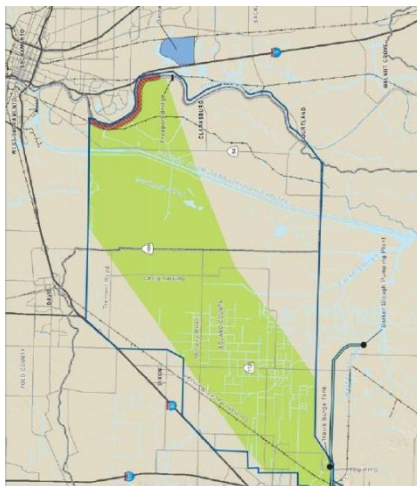
	Diversion Capacity	Links, location and details
 <p>American River near Sac State</p>	From 105 mgd expanded to 200 mgd	Fairbairn Water Treatment Plant Expansion Built between 2006-2008. Called th Sacramento River Water Treatment Intake Expansion and the American River M Model Photo taken from the bridge crossing American River at the Cal State Sacramen Sacramento http://www.nhcweb.com/upload/muni_indus/INTK_American_River.pdf http://www.nhcweb.com/section.asp?pageid=7077 http://www.bbinfrastructureinc.com/projects/water/fairbairn.htm
 <p>Scale above I-Street Bridge on Jabborn St</p>	160 MGD	SACRAMENTO RIVER WATER INTAKE FACILITY AT ROBERT T MATSUI WA IN SACRAMENTO http://www.bbinfrastructureinc.com/projects/water/sacramento.htm
struction	225 CFS	PCWA American River Intake facility upstream of Folsom Dam http://www.usbr.gov/mp/ccao/pcwa/docs/faq.pdf

	185 MGD	<p>FREEPORT REGIONAL WATER PROJECT WATER INTAKE FACILITY ON THE RIVER</p> <p>http://www.bbinfrastructureinc.com/projects/water/freeport.htm</p>
	250 cfs	<p>CCWD Alternative Intake Project on Victoria Canal</p> <p>http://www.ccwater.com/aip.asp</p> <p>http://www.waterrights.ca.gov/application/PetNot/docs/20245_aip_ccwd_petit_treatment/california/projects/1000821853/</p> <p>Los Vaqueros Reservoir has been raised and this new intake provides new surface for CCWD</p>

	160 MGD WITH EXPANSION	<p>DELTA WATER SUPPLY PROJECT (CITY OF STOCTON CONJUNCTIVE USE) I</p> <p>(Note that this location is the same spot shown in the DRMS Phase 2 central con locating a water siphon and tunnel under the San Joaquin River)</p>  <p>http://deltawatersupplyproject.com/</p> <p>http://deltawatersupplyproject.com/documents/DWSP_Update_Jan2012_Final.pdf</p> <p>http://www.adolfson.com/projects/stockton-delta-water-supply-project</p>
	100 TO 225 CFS	<p>AMERICAN RIVER PUMP STATION PROJECT. 2010 contract award</p> <p>Renamed Placer County Water Agency Pump Station Project</p> <p>http://www.usbr.gov/mp/ccao/pcwa/docs/fag.pdf</p> <p>http://www.whpacific.com/pages/Portfolio/Project.aspx?ProjectID=13</p>
	100 MGD	<p>FOLSOM SOUTH CANAL CONNECTION</p> <p>http://www.bbinfrastructureinc.com/projects/water/folsom.htm</p> <p>185 mgd or 203,5000 AFY</p> <p>page with links to the main documents</p> <p>145,000 cfs to 160,000 cfs in flood times, 200 mgd all other times? Not Clear</p> <p>http://www.parkerdesign.info/AR_site/html/folsom_dam_mods/increase_flood</p>
below	210 CFS	<p>ELKHORN DIVERSION ON THE SACRAMENTO RIVER</p>

 <p>RD 108 Wilkins Slough</p>	830 CFS	<p>WILKINS SLOUGH PUMPING PLANT FOR RD 108 http://rd108.org/project-spotlight/fishscreen-program appears to represent a least 50%, increase in water diversion rights or permits.</p>
<p>to be dismantled when Wilkins Slough is operational</p>		<p>SOUTH STEINER PUMPS AND PIPELINE http://rd108.org/images/stories/south%20steiner%20pumps%20and%20pipeline%20is_09-28-11.pdf</p>
	460 CFS	<p>WOODLAND/DAVIS NEW SACRAMENTO RIVER INTAKE (DWWSP) http://www.wdcwa.com/the_project http://cityofdavis.org/pw/water/pdfs/2011.11-DWWSP-Alternatives-Summary-1.pdf http://ice.ucdavis.edu/education/esp179/?q=node/185 http://www.cityofwoodland.org/civica/filebank/blobdload.asp?BlobID=4832 http://www.dcn.davis.ca.us/dcn/projects/conjunctiveuse/chapt2.html http://davismerchants.org/water/Summaryofwateralternatives.pdf</p>

id Facilities



240 cfs plus expansion and conjunctive use not yet defined

NBA NEW SACRAMENTO RIVER INTAKE (PROPOSED) or the SOLANO COUNTY INTAKE PROJECT and/OR EXPANSION OF Bryte Bend Water Treatment Plant

<http://www.water.ca.gov/engineering/Projects/Current/NBA/>

<http://www.scwa2.com/Documents/IRWMP/IRWMP%20Section%205.pdf>

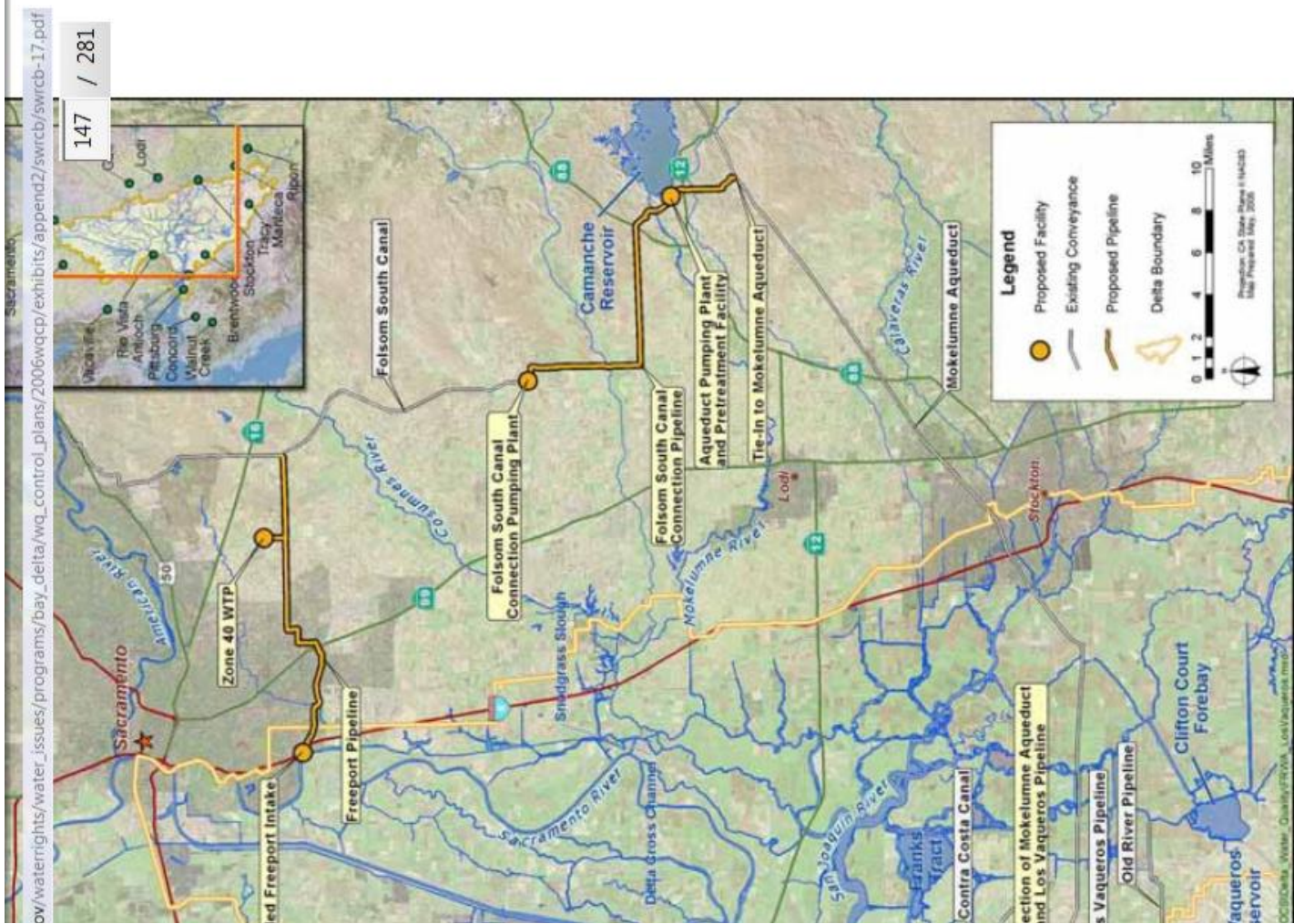
<http://www.scwa2.com/Documents/IRWMP/FINAL%20APPENDIX%20A.pdf>

<http://www.water.ca.gov/engineering/docs/NBA%20AIP%20Scoping%20meetings%20Powerpoint%20Presentations.pdf>



Figure 4-17 Potential Location of Solano County Water Agency Alternative Intake

 <p>structureinc.com/projects/water/red_bluff.htm</p>	<p>2100 cfs</p>	<p>Redbluff Pumping Station and Fish Screen http://www.bbinfrastructureinc.com/projects/water/red_bluff.htm</p> <p>NODOS means north of Delta offsite storage. Perhaps this particular huge dive screen will be filling off-river storage like the proposed Sites project?</p>
		<p> http://www.usbr.gov/mp/ccao/docs/auburn_rpt/Appendix%20A/March%202006%20Project%20Des http://www.usbr.gov/mp/ccao/docs/auburn_rpt/12-06%20final.pdf http://www.usbr.gov/mp/ccao/docs/auburn_rpt/Appendix%20A/March%202006%20Project%20Des http://www.usbr.gov/mp/ccao/docs/auburn_rpt/ http://www.parkerdesign.info/AR_site/html/folsom_dam_mods/increase_floodwater.html http://www.parkerdesign.info/AR_site/html/common_features/cf_map.html http://www.srco.com/Bridges/Folsom-South-Canal.html http://www.bbinfrastructureinc.com/docs/FolsomSouthCanalConnectionProject07-07.pdf http://www.nwah2o.org/rwa/files/inwmp_sec7_impactsbenefits_june06.pdf http://www.safca.org/documents/Mayhew/Final%20Broken%20Down/Appendix%20E.pdf http://www.spk.usace.army.mil/projects/civil/natomascertification/natomasmastermap.pdf </p>



A look at how the Folsom South Canal will be used to convey River water around the North Delta and into the Mokelumne System.

Figure 1 Folsom South Canal Use to convey water around the Delta

More links next page:

**Don & Kathleen Updegraff's
Clarksburg Marina**

**Legacy
Community
Clarksburg**

**Construction
Zone Border**

Fueling Station

Construction/ Heavy
Equipment Yard

Intake #2

Concrete
Batch Plant

**Tunnel Muck
Dump Site**

Constant barge
traffic and numerous
barges anchored

Constant 96 dBA
from construction
equipment/ Rock
Drills

Fueling Station

Intake #3

Concrete
Batch Plant

Blasting at
Excavation sites

Constant 102 dBA from
pile driving with 6 or
more pile drivers at
once at 3 intakes

Geotechnical
Exploration
Zone

**Legacy
Community
Hood**

Construction/ Heavy
Equipment Yard

Intake #5

Concrete
Batch Plant

Fueling Station

New Transmission
lines/ Helicopter Noise

Google Earth

1993

Imagery Date: 10/25/2016

38°22'4.45" N

121°31'14.38" W

elev 10 ft

eye alt 32690 ft